



**LANGLEY
POLICY
DIRECTIVE**

LAPD 1710.1

Effective Date: June 21, 2005

Expiration Date: July 24, 2007

Responsible Office: Flight Research Services Directorate

SUBJECT: Langley Research Center Aviation Safety Policy

1. POLICY

This policy directive sets forth an overview of the Langley Research Center (LaRC) Aviation Safety Policy. The objective is to provide for the safe operation and use of aircraft assets in support of Center requirements and NASA Headquarters directives.

2. APPLICABILITY

This policy applies to all LaRC aircraft operations, and operations that utilize non-NASA aircraft to carry LaRC people (civil servants, contractors, detailees) or equipment in support of NASA programs.

3. AUTHORITY

None

4. REFERENCES

- a. NPD 8621.1, "NASA Mishap Reporting and Investigating Policy."
- b. NPD 7900.4, NASA Aircraft Operations Management."
- c. NPR 7900.3, "Aircraft Operations Management."
- d. NPR 8715.3, "NASA Safety Manual."
- e. LAPD 1150.2, "Boards, Panels, Committees, Councils, and Teams."
- f. LAPD 1700.1, "Safety Program."
- g. LAPD 1700.2, "Safety Assignments."
- h. LMS-OUP-D1, "Flight Research Services Directorate Organizational Unit Plan."
- i. LMS-CP-0902, "Unilateral Stop Authority for Flight Operations and Related Activities."

5. RESPONSIBILITY

Effective administration of Center aviation safety policy and implementation of the LaRC Aviation Safety Program is made possible through the efforts of the Center Director, the Executive Safety Board and functional subcommittees, including the Airworthiness and Safety Review Board (ASRB), the Director of the Flight Research Services Directorate, the Chief of Research Operations,

the Aviation Safety Officer and LaRC aviation personnel. Safety cannot be separated from planning, management, and operations; therefore the primary responsibility for aviation safety rests with line organization management, beginning with the Center Director.

a. Center Director

The Center Director has overall safety responsibility.

b. Deputy Director

(1) The Deputy Director is responsible for the Center safety program as Chair of the Executive Safety Board (ESB).

c. Associate Director for Research and Technology (R&T) Competencies

(1) The Associate Director for R&T Competencies is responsible for overall safety in the activities of all R&T Competencies, including the Flight Research Services Directorate.

d. Director, Flight Research Services Directorate

(1) The Director, Flight Research Services Directorate is the senior manager of all Center aircraft flight-related activities and aviation safety elements.

(2) The Director, Flight Research Services Directorate establishes policy and guidelines for Center aviation safety that are consistent with Center Director guidance and in compliance with Agency aircraft management, and safety policies and regulations.

e. Aviation Safety Officer (ASO)

(1) The ASO provides counsel and technical input to the development and implementation of the LaRC Aviation Safety Program. (See Attachment, "Implementation of LaRC Aviation Safety Policy and Aviation Safety Program.")

(2) The ASO is a designated NASA pilot who has authority to report directly to senior management (described in Paragraphs 5.a through 5.d) on safety matters as described in the Flight Research Services Directorate Organizational Unit Plan (LMS-OUP-D1).

(3) The ASO (along with the Chief of Research Operations) is responsible for creating a culture in the flight organization that will facilitate aviation safety in the operation of aircraft.

f. Chief of Research Operations

- (1) The Chief of Research Operations (along with the ASO) is responsible for creating a culture in the flight organization that will facilitate aviation safety in the operation of aircraft.
- (2) Day-to-day implementation of the LaRC Aviation Safety Program is the responsibility of the Chief of Research Operations in coordination with the ASO.
- (3) The Chief of Research Operations, all functional managers and the ASO shall promote aviation safety as a climate within the aircraft operational organization and have direct responsibility to senior management for advice and counsel.
- (4) Additionally, review processes will be established and monitored to provide oversight and assessment of potential and observed aviation equipment, operational, and flight hazards. These processes will identify and address all credible hazards and shall provide methods for control (i.e., elimination or mitigation).
- (5) A system of checks and balances, with continuous management surveillance will be implemented to assure reasonable, effective, and efficient application of safety policies, rules and procedures.

g. Aviation Employees

- (1) It is the responsibility of all aviation employees to work safely in accordance with established policies, procedures and guidelines.
- (2) Civil servant employees and on-site contractor staff in the line organization must be intimately involved in the safety focus of the organization.
- (3) It is the policy of the Langley Research Center to take all reasonable steps necessary to avoid loss of life, personal injury, property damage and mission failure.
- (4) All civil servant and contractor staff with functional responsibilities pertaining to aviation operations are vested with the right to exercise unilateral stop authority as described in LMS-CP-0902, "Unilateral Stop Authority for Flight Operations and Related Activities."

6. DELEGATION OF AUTHORITY

a. Chief of Research Operations

(1) The Chief of Research Operations is delegated responsibility for supervision of all LaRC aircraft operations and support activities, and for development and day-to-day implementation of the LaRC Aviation Safety Program to administer Center aviation safety policy.

7. MEASUREMENTS

None

8. CANCELLATION

LAPD 1710.1, dated April 29, 2004.

original signed on file

Delma C. Freeman, Jr.
Acting Director

Attachment

IMPLEMENTATION OF LaRC AVIATION SAFETY POLICY AND AVIATION SAFETY PROGRAM

1. Hazard Assessment and Risk Management

The LaRC Aviation Safety Program will identify credible hazards, assess their potential for mishap, and then manage the risk to achieve safety of aircraft operations and related activities. The Program will apply the concept of risk management, not risk avoidance. This concept will utilize a system of process controls and redundancies to minimize the possibility of a single process, technical, or human failure causing an accident. Management system/oversight and specific technical controls will be integral elements.

2. Aircraft Mishap and Near Mid-air Reporting and Investigation.

The ASO shall establish emergency response procedures in the form of a Pre-Mishap Plan. This Plan shall provide an immediate response format for the proper implementation of required reporting in the event of an aircraft mishap occurrence. In addition to LaRC reporting requirements and procedures, near mid-air and other similar potential operational hazards may be reported through the NASA Aviation Safety Reporting (ASRS) Program. Additional reporting requirements are embodied in NPR 8621.1, "NASA Mishap Reporting and Investigating Policy."

3. Research Program Safety Plans.

All programs managed or controlled by NASA Langley that utilize NASA or non-NASA aircraft assets, must provide safety plans as required documentation. These plans are to be written by the implementing organization and must receive concurrence from the Flight Research Services Directorate. The plans must include assessment of potential hazardous operations, mitigation strategies, and a review of operations.

4. Safety Reviews, Readiness Reviews and Configuration Change Activities and Reviews.

a. The Airworthiness and Safety Review Board, as defined by LAPD 1150.2 Attachment, "Boards, Panels, Committees, Councils, and Teams," will review all aircraft flight experiments or demonstrations managed or controlled by NASA Langley utilizing NASA-owned or non-NASA-owned aircraft as part of the activity. The ASRB reports to the Executive Safety Board (ESB).

b. Readiness reviews will be conducted prior to aircraft operations after any major maintenance activity or major configuration change. These will be conducted by the Flight Research Services Directorate and will address airframe systems and interfaces to research systems. These reviews will address research systems as well if these systems were not subjected to program/project level reviews including the themes of aviation safety/operations.

c. Maintenance and modification of LaRC aircraft and associated baseline research systems will be subject to configuration management. This will include review and approval processes and documentation/cataloging of changes. Documentation will include appropriate drawings with material specifications and wiring schematic diagrams. Consideration for safety of flight, safety of equipment, software and hardware integrity, electronic circuit anomalies, and potential for personnel injury will be integral to configuration management.

5. Training

The Aviation Safety Officer shall provide or facilitate training in all aspects of aviation safety. This training shall be provided, as necessary, to all personnel involved with aircraft operations.

6. Inspections/Surveys

The Chief of Research Operations, with the assistance of the ASO, shall conduct inspections and surveys, as necessary, to ensure the safety awareness of aircraft operations personnel. Additionally, aviation operations, facilities and supporting infrastructure and organizations will be subjected to biennial safety/functional reviews from Intercenter Aircraft Operations Panel (IAOP) teams as described in NPR 7900.3, "Aircraft Operations Management."

7. Hazard Reporting and Investigation

A database shall be maintained to track potential aviation hazards, anomalies and close calls that have been identified during operations. This database shall include those hazards, events and anomalies that have potential safety impact and that are not reportable under other required procedures. This database shall be used to formulate corrective actions to alleviate hazard potential.

8. Personal and Emergency/Survival Equipment

All aircraft assigned to LaRC will be outfitted with survival and emergency equipment appropriate for the mission being conducted. All individuals with airborne or ground support functional responsibilities for these aircraft and missions must be outfitted with personal protective equipment appropriate for the mission and function being conducted. Equipment requirements will be defined by the Flight Research Services Directorate, which will maintain inventories for permanent or temporary loan.